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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/811,431 | 03/29/2004 | Toshihiko Kasai | 024016-00078 | 2960 |
| 4372 | 7590 | 07/27/2005 | EXAMINER | |
| ARENT FOX PLLC 1050 CONNECTICUT AVENUE, N.W. SUITE 400 WASHINGTON, DC 20036 | | | NGUYEN, KHANH V | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2817 | |

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/811,431

Applicant(s)

KASAI ET AL.

Examiner

Khanh V. Nguyen

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/29/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the **“inversion input terminal” and non-inversion input terminal** must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 1-6 are objected to because of the following informalities:

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Claim 1, line 5, "inversion" should correctly be --inverted--.

Claim 1, line 6, "non-inversion" should correctly be -- non-inverted --.

Claim 1, line 9, "inversion" should correctly be --inverted--.

Claim 2, line 13, "inversion" should correctly be --inverted--.

Claim 2, line 14, "non-inversion" should correctly be -- non-inverted --.

Claim 2, line 17, "inversion" should correctly be --inverted--.

Claim 3, line 21, "inversion" should correctly be --inverted--.

Claim 3, line 22, "non-inversion" should correctly be -- non-inverted --.

Claim 3, line 25, "inversion" should correctly be --inverted--.

Claim 4, line 24, "inversion" should correctly be --inverted--.

Claim 4, line 25, "non-inversion" should correctly be -- non-inverted --.

Claim 4, line 28, "inversion" should correctly be --inverted--.

Claim 5, line 3, "inversion" should correctly be --inverted--.

Claim 6, line 7, "inversion" should correctly be --inverted--.

Claim 6, line 8, "non-inversion" should correctly be -- non-inverted --.

Claim 6, line 11, "inversion" should correctly be --inverted--.

Claim 1-9, "**signal(s)**" and "**amplifier(s)**" appear in these claims should correctly be --**signal**-- and --**amplifier**--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-6, it is not clear from the drawing which so called "inversion input terminal" and "non-inversion input terminal" as claimed.

Claims 2, 5, phrase "A line driver for amplifying at least one input signal(s) by each input of the input signal every output period that appears repeatedly" appears to be unclear and indefinite as to what is being claimed.

Claims 3, 6, phrase "A liquid crystal display device for applying an image data voltage signal through plural data lines every horizontal period that appears repeatedly" appears to be unclear and indefinite as to what is being claimed.

Claim 5 recites the limitation "**the** first switch" in line 5. There is insufficient antecedent basis for this limitation in the claim. (see claim 2, the first limitation)

It is not clear which "**number**" is intended in claims 7-9 and "**fetch operation**" in claim 10. **The claims (7-10) are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.**

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Kokubun et al. (6,448,836).

Kokubun et al. (Fig. 9) disclose an **exact** structure as applicant's invention (FIGURE 3) comprising: operational amplifier for amplifying the input signal(s) (IN); and a switch section (SW1/SW2/SW3/SW6) for selecting and switching to operational amplifiers in amplification operation by receiving inputs of the input signals, the switch section switching every output period, wherein offset cancellation is made on operational amplifier(s) not selected during the output period. Note, Kokubun et al (Fig. 6) also disclose operational amplifiers. Regarding claim 8, Kokubu et al. (Fig. 17) disclose addition operational amplifiers and switch sections. Regarding claim 10, wherein reference voltage to be used in the offset voltage fetch operation, either input voltage prior to the offset voltage fetching operation or output voltage after offset voltage cancel operation prior to the offset voltage fetching operation is used. And wherein Kokubun et al. is also implemented in a LCD device.

Allowable Subject Matter

Claims 1-6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional references (Mehr et al. (6,756,842); Udo et al. (6,586,990)) show further analogous prior art circuitry having offset cancellation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh V. Nguyen whose telephone number is (571) 272-1767. The examiner can normally be reached from 8:00 AM - 3:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571) 272-1769. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**KHANH V. NGUYEN
PRIMARY EXAMINER**